

**ABSTRACT**

An aqueous neutral to mildly alkaline metal bicarbonate solution is disclosed. The solution comprises metal bicarbonate dissolved in the solution, the metal bicarbonate comprising bicarbonate anions and metal cations. In addition there is a pH adjusting agent in the  
5 solution in an amount whereby the solution is at a neutral to mildly alkaline pH. Also disclosed is a process of preparing an aqueous neutral to mildly alkaline metal bicarbonate solution comprising bicarbonate anions and metal cations. The process comprises reacting a compound selected from the group consisting of metal carbonate, metal carbonate hydroxide, metal oxide, metal hydroxide and any mixture thereof with an effective  
10 concentration of a pH adjusting agent to produce the aqueous neutral to mildly alkaline metal bicarbonate solution, wherein the pH adjusting agent is present in an amount whereby the solution is at a neutral to mildly alkaline pH. Further disclosed are a method of preventing and/or treating certain inflammatory diseases and/or degenerative diseases in a mammal, a method of preventing and/or treating certain viral diseases in a mammal, a  
15 method of decreasing and/or treating senescence and/or of increasing longevity in a mammal, a method of scavenging protons in a mammal, a method of decreasing proton concentrations in a mammal by altering carbonic anhydrase enzyme reactions in said mammal, a method of decreasing inflammation and/or inflammatory conditions in a mammal and a method of increasing motor activity and/or decreasing fatigue in a  
20 mammal.